

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2001-156361

(43)Date of publication of application : 08.06.2001

(51)Int.Cl.

H01S 3/032

G01B 9/02

H01S 3/134

(21)Application number : 11-375939

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(22)Date of filing : 24.11.1999

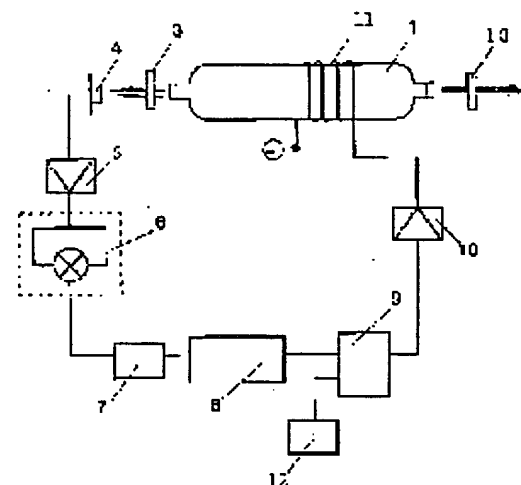
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(54) MANUFACTURING METHOD FOR HIGH-OUTPUT FREQUENCY STABILIZATION HE-NE LASER FOR OPTICAL HETERODYNE LIGHT SOURCE AND FREQUENCY STABILIZATION LASER DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a high-output frequency stabilization He-Ne laser for a optical heterodyne interferometer light source by taking three vertical modes out of five vertical modes using a polarizer.

SOLUTION: In oscillation state with five longitudinal mode for stabilization, three longitudinal mode, center as well as both ends, are selected among five vertical modes using a polarizer. Related to stabilization for oscillation with five longitudinal modes, the laser tube oscillating 4-5 or 5-6 longitudinal modes is used, and the interoscillation longitudinal-mode beat signal of the envelope generated by duplication of a plurality of interoscillation longitudinal-mode beat signals and the same polarization direction is taken out as electric signal, which is inputted in a frequency/voltage converter, and the output voltage is used as a fractional signal for controlling a laser resonator length.



LEGAL STATUS

[Date of request for examination] 07.07.2000

[Date of sending the examiner's decision of rejection] 17.06.2003

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

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